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INTERNATIONAL BULLETIN OF PLANT PROTECTION

DISCOVERIES AND CURRENT EVENTS *

Cyprus: *Eurygaster integriceps*(1).

Eurygaster integriceps is fairly generally distributed in the lower parts of Cyprus, but does not appear to cause appreciable damage to cereals, and does not occur very abundantly.

The only report of damage by this species so far recorded was on a small area of potatoes.

Cirenaica : Some Harmful Insects (2).

(1) Moroccan Locust (*Dociostaurus maroccanus* Thnb.).

This year, the development of the Moroccan locust was reported by the Government Office of El Abiar as early as the middle of March.

I arrived at El Abiar on 8 April and started control measures against the swarms of hoppers which had reached the third and fourth stages, with excellent results.

I was then urgently summoned to Barce (El Merg), and from 15 May right through June I had to maintain a severe struggle against very large swarms of locusts coming from the desert steppes, first to the east of Sidi Rahuma and afterwards to the East of the Barce-Hauabi road.

The destruction of the hoppers was achieved by means of a mixture of ' Urania ' and of sodium arsenite.

For hoppers that had undergone the second and third stage the mixture used consisted of 500 g. of ' Urania ', 500 g. of sodium arsenite and 1 litre of molasses in 95 litres of water.

A mixture of 1000 g. of ' Urania ', 1000 g. of sodium arsenite and 2 litres of molasses in 90 litres of water was used against hoppers which had reached the fourth stage ; 2000 g. of ' Urania ', 2000 g. of sodium arsenite and 3 litres of molasses in 90 litres of water was the mixture used on resting adults ; in a few cases I attempted to employ mixture by direct spraying.

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* In this, as in the two next chapters, the countries are arranged in French alphabetical order.

(1) Communication from the official correspondent of the Institute, Mr. H. M. MORRIS, M. Sc., F. E. S., Government Entomologist, Nicosia, Cyprus.

(2) Communication from the official correspondent of the Institute, Mr. G. KRUGER, Direttore del Laboratorio d'Entomologia del R. Ufficio Agrario della Cirenaica, Bengasi.

Dung or straw fires with green boughs are the best means of checking invasion of the crops ; once the cultivated fields are invaded by the adults no smoking out is of any use.

At midday on 21 May the first swarm of adults were observed, coming from the S. S. W., followed in a few days by other swarms which dispersed all over the neighbourhood of Barce and inflicted damage on the lately planted orchards and vineyards, and laid eggs on the ground left uncultivated the preceding year.

I add a summary of the observations made during the locust campaign of 1930 and conclude.

During the campaign against the swarms of the second and fourth stage and especially against the resting swarms I observed very large troops of hundreds of swallows flying low and making sharp wing movements in such a way as to oblige the hoppers to skip, and so catch them. These masses of swallows indicated the presence of the swarms of hoppers which are by no means easy to discover on tracts of large extent, usually traversed only by a few shepherds.

Sparrows and other birds have proved to be active in destroying the adults : and for this reason it would seem essential to forbid the shooting of birds in localities where destruction of locusts has often to be carried out.

I noted the almost total absence of other natural enemies such as the Diptera (*Anthracinae* and *Sarcophagidae*), Hymenoptera (*Sphegidae*), Coleoptera (*Lyttinae, Zonabris*).

From the above it may be assumed that the maximum period of development of the Moroccan locust, in Cirenaica, has not yet been reached.

Also noticeable has been the prevalence of *Decticus albifrons* Fabr. (*Locustidae*) which has laid eggs on the barren lands of the Barce plain.

Doc. maroccanus, in Cirenaica, does not show continuity of distribution ; the permanent breeding centres, which are uncultivated lands with sparse vegetation, are separated by large tracts of land covered with woods and brushwood, forming obstacles which are easily traversed by the swarms of flying locusts. These usually follow, as do the swarms in the hopper stage, the direction from East to West. Even stray specimens do the same, such as I saw on 12 May in the neighbourgood of the station at Lete and on 14 May along the Driana road as far as the Bersim division. On the other hand the flying swarms which invaded the Barce plain from 21 May onwards came from the S. S. W. This invasion has probably some connection with the prairies fires in the Gerdes zone, which lies at the second level of the tableland of Cirenaica.

It is certain that the immigration of *Doc. maroccanus* into Cirenaica from the localities of the present geographical distribution is impossible.

The Moroccan locust in Cirenaica is a relic which will be unable to survive a continuous and sustained campaign with a service for the prompt signalling of hoppers which will be immediately dealt with by the chemical means at our disposal.

(2) *Opatroides punctulatus* Br.

This beetle (*Tenebrionidae*) has been very troublesome in the vineyards of the Oasis of El Guarcia, at a few kilometres to the South of Bengazi, destroying, in spring, grafts and buds.

(3) *Polychrosis botrana* Schiff.

After comparison with the abundant material of the collection of Count Emilio Turati, I do not hesitate to pronounce that I captured the vine moth (' tignoletta dell'uva ') on 6 October, 1929 at Derna.

Eritrea : The Desert Locust (*Schistocerca gregaria*) (1).

From November, 1929 to January, 1930 no locusts had been observed in the Colony. In February, 1930 at Zula, Addis, Uaa, on the Eastern lowland, some groups of hoppers were discovered, hatched from eggs laid in January by small swarms of locusts ; these were destroyed by flame guns and poisoned bran.

The month of May, 1930 marks the beginning of the large flights and the renewed invasion of swarms, coming from beyond the Abyssinian border.

On 12 May a large swarm of locusts was observed near the mount Admit coming from the North, and making for Naefa ; on 22 May these flew over Cheren and reached the territory of Mansura (Upper Barca).

Small groups of hoppers were reported between 17 and 22 May at Soceb, Emberemi, Uschiro (Eastern lowland), and were at once destroyed with flame guns and poisoned bran.

On the 17 May a communication from the Agenzia Commerciale Italiana of Dessiè stated that large numbers of locusts from Dessiè were steering North, on 21 May the Gondar Agency reported that a large swarm coming from the South had flown over the Meghec valley and were steering towards Uoggherà (North).

It was not till the end of the month that a large number of locusts, coming from Adi Abò and flying over the Cohain, entered the territory of the Colony.

It may be regarded as certain that other swarms will follow these up, as happened in the previous years.

Control measures have been initiated against the adults and their movements are closely followed with the object of getting to know precisely where they lay eggs. The control squads equipped with flame guns and poison bran have dispersed over the various regions and are expected to proceed over the infested areas and to destroy the hoppers as soon as they appear.

Latvia: Some Diseases of Flax and Results of Disinfection of the Seed (2).

In Latvia flax is attacked by the following diseases.

' Rust ' (*Melampsora Lini* [Pers.] Desm.) is widespread and has caused losses of more or less importance. In 1928 cases of stem disease caused by *Phoma exigua* Desm. and *Ascochyta linicola* Naumow and Wassiliewski occurred. These fungi cause a drying of the stem and destroy the fibre. The percentage of damaged stems reached 26-60 %. *Colletotrichum Lini* (Westerdijk) Tochinai caused serious damage among the young crops ; 36 % of the infected seedlings were killed off. ' Wilt ' due to *Fusarium Lini* Bolley was observed to a slight extent. *Cladosporium herbarum* (Pers.) Link. was commonly met with, but always in a saprophytic state.

Seed disinfection greatly increased the crops. In 1927 dusting gave good results. The largest crop increase (28.1 %) was obtained with ' Abavit B' . Other disinfectant dusts, such as, ' MCIII ', ' Sagetan ', ' Cuprum carbonicum ' and ' Heyden ' also gave satisfactory results. ' Porzol ' was found the least suitable. In 1928 a good result was obtained only with ' Germisan ', which was applied by a simple and rapid method (GeKaBe) and gave an increase of 21 %. However, in 1928 the beneficial effects of the dusts could not be definitely proved owing to the varying results obtained on different plots, probably as a result of the injurious effects of storms which occurred shortly after sowing.

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(1) Communication from the official correspondent of the Institute, the Capo del R. Ufficio Agrario dell'Eritrea, Asmara, transmitted by the Government of Eritrea.

(2) Communication from the official correspondent of the Institute, Mr. M. Eglits, Dozent an der Universität und Direktor des Instituts für Pflanzenschutz, Riga, Lettland.

Hellenic Republic: Damage to Cereals from the Yellow Rust (*Puccinia glumarum*) (1).

There has been a serious development of yellow rust (*Puccinia glumarum*) in the cereal crops in the Republic this year in consequence of atmospheric conditions favouring its appearance. The spring and summer have been characterised by excessive moisture, under the form of constant dews accompanied by high temperatures.

Macedonia. In the district of Salonica, the ' Camberra ' wheat, late sown, has shown resistance and still more so the variety ' Mentana ' and ' Contousi ' of Thrace. Very considerable damage has been done to the ordinary wheats in the lowlands. More than 50 per cent. of the crop of several villages has been destroyed.

In the Chalcidice, in the case of certain villages the crop is seriously reduced and in some the wheat will not even be reaped. On account of the poor development of the grain, threshing by animals cannot be effected, and the low yield will make threshing with the machine very costly. Barley has not suffered. Late sown oats are damaged.

At Drama, all the varieties of wheat, even the ' Camberra ' are attacked.

Thessaly. In the plain of Larissa, the cereal crop of several communes is destroyed ; in others the losses amount to 70 per cent. of the production.

In the plain of Halmyros, the losses are also considerable.

Peloponnesus. In the Department of Arcadia, a large proportion of the crop in several villages has been destroyed by rust.

The same has occurred in the Department of Laconia.

In these villages the losses amount to two thirds of the production. Elsewhere the wheat is reaped as forage for the animals, but even so it yields hay of poor quality.

In many communes of Macedonia, Thessaly and the Peloponnesus the attack is so severe that the wheat fields have become brown and both straw and grain are quite bitter.

The services are engaged in determining the most resistant varieties.

Rumania: Locust Invasion (2).

At the beginning of May 1930 locusts caused some damage in the southern part of the Dobrudja. This invasion however has not become as extensive as the Rumanian and foreign press foretold, but has, on the contrary, been of a strictly local character. A Phasgonurid belonging to the Rumanian fauna in its larval state has destroyed the foliage over a limited part of the forest lands. It has also in some cases attacked small areas of land under crops, particularly beans. The wheat has been hardly damaged at all.

The invasion was more serious near the mouth of the Danube and in Bessarabia where in the autumn of 1929 *Locusta migratoria* L. laid eggs over an extensive region. The Rumanian Government has taken all the necessary measures to destroy the hoppers when they hatch.

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(1) Communication from the official correspondent of the Institute, Mr. C. A. Issaakidès, Technical Advisor of the Minister of Agriculture, Athens.

(2) Communication from the official correspondent of the Institute, Mr. Wilhelm K. Knechtel, Bucharest.

VARIOUS QUESTIONS

Data and Information on Damage caused to Cultivated Crops by the Cold of the Winter 1928-1929 *

India (Bombay Presidency) (1). — The Bombay Presidency, including Sind, experienced a very severe winter in 1928-29. In some cases, the damage to field and garden crops was considerable.

Number of days when the minimum temperatures varied from 30 to 43° F. in the five Divisions of the Bombay Presidency.

1. Sind. January 21 days, minimum temperature varied from 31 to 43°F. February 8 days, minimum temperature varied from 30 to 43° F. Wheat and fruit trees very badly damaged. Very low temperature were recorded during the greater part of January and early part of February.

2. Gujarat. January 2 days, minimum temperature varied from 37 to 38° F. February 2 days, minimum temperature ranged from 37 to 40° F. Cold wave of short duration viz., 30th January to 2nd February, but severely damaged cotton, tobacco, cumin (*Cuminum cyminum*) and fennel (*Foeniculum vulgare*). Damage to cotton was estimated at between 25 and 80 per cent.

3. Deccan. January 2 days, minimum temperature 39° F. February 2 days, minimum temperature from 40 to 42°F. There was frost on 31st January and 1st and 2nd February. Some of the important crops damaged were sugarcane, wheat, grapes, tobacco, figs, papaya and plantains. Sugarcane was damaged the most on the Deccan Canals, resulting in sprouting of dormant eyebuds, increase of fibre and reduction in and deterioration of *gul*. The damage to cane by frost was estimated at 80 per cent.

4. Karnatak. There was no frost in this tract. Minimum temperature in January was 51°F. Not much damage was done by the cold wave. The cotton crop was delayed.

5. Konkan. There was no frost. Slight damage was done by the cold wave to vegetables such as tomato and chillies, in the northern parts.

Damage to Crops.

Sugarcane. This crop was very severely affected on the Deccan Canals. Tops were damaged and a bacterial rot set in, resulting in sprouting of dormant buds and deterioration in the quality of *gul*. The *topmost sets* were rendered unfit for seed.

Grape. Completely destroyed at Nasik and round about The crop was almost ripe and ready for marketing when the fruit and the canes were badly damaged. The frost-affected canes were pruned out, much earlier than usual, and as a result of injury to canes, downy mildew appeared in a virulent form for the first time in this Presidency.

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* Continued from No. 8.

(1) Communication from the official correspondent of the Institute, Dr. B. N. Uppal, Plant Pathologist to the Government, Bombay Presidency, Poona.

Cotton. Leaves and flowers burnt by frost. Growth checked. Damage to the extent of 25 to 80 per cent. done in Gujarat. In other tracts, crop was normal.

Bananas. Top-most leaves and young fruit dried up. New shoots came out later delaying the crop.

Mangoes. Except in Sind, the mango escaped injury by frost.

Vegetables. Badly damaged tops and fruit. At many places crop totally destroyed and uprooted.

Tobacco. Very badly damaged in Gujarat and the Deccan. Frost injury to leaves and blossoms.

Wheat. Severely damaged in Sind, Gujarat and the Deccan. Heads became white and formation of grain retarded.

Sorghum (Jowar). Rabi variety damaged in Gujarat. Leaves and tops dried up.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany (1). — The Decree of 3 June 1930 concerning the prevention of the introduction of diseases of conifers, prohibits until further notice the importation of plants or parts of plants belonging to the genera *Abies*, *Picea*, *Pinus*, *Pseudotsuga* and *Tsuga*. The importation of other coniferous plants or their parts is permitted until further notice on condition that they are packed separately or together and that each consignment is accompanied by a certificate in the German language issued by an expert of the official Plant Protection Service of the country of origin stating that he has inspected the package and that it contains no plant or part of a plant of any of the above-mentioned genera. The Minister of Agriculture may authorise exceptions to these regulations. Direct transit of coniferous plants or their parts is authorised under the control of the Customs Houses.

Germany (State and Free City of Hamburg) (2). — In virtue of the Police Ordinance of 15 March 1930, relating to the control of wart disease ('Kartoffelkrebs', *Synchytrium endobioticum*) lands cultivated in potatoes are subject to an inspection carried out by the Police, by the building authorities (Allotment Gardens Division) and by the Institute of Applied Botany (Central Station for Plant Protection). The notification of the presence of wart disease as well as of suspected symptoms is rendered compulsory.

When the presence of potatoes infected with wart disease has been ascertained on any plot, the debris of the potato plants and in particular the tubers and the haulm, must be carefully collected and burnt and the ashes buried at a depth of a metre at least.

The replanting of potatoes coming from infected plots is prohibited except by permission of the police authorities, as also the importation of such potatoes from the

(1) Communication from the Biologische Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

(2) Communication from the Biologische Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

farm where they grow, and the use of them for fodder or otherwise, unless they have been boiled in water or steamed. No remains of such potatoes may be thrown on the manure or compost heap or in the liquid manure trenches. Farms infected with wart disease are forbidden to sell or to give away either manure or purin.

The planting of potatoes in the fields of a farm where the presence of wart disease has been ascertained, is forbidden for the period of ten years.

On the rest of the territory of such farms only such varieties of potatoes may he planted for the following ten years as are designated as being resistant, by the Plant Protection Service of Germany.

Potatoes are not to be planted in allotment or kitchen gardens, other than the varieties ' Paulsens Juli ' and ' Moodrows Preussen ', original selected seed or first degree of reproduction. The sale of these seed potatoes depends on a concession to be applied for and on the observation of special conditions : they are subject to inspection.

Any infringement of these regulations will be punished with a fine of 150 RM or a term of imprisonment.

The Ordinance of 12 March 1930 relating to the control of the wart disease of potatoes is abrogated.

Germany (Hesse). — The Decree of 3 March 1930, containing provisions relating to the manufacture and sale of bacterial preparations (cultures) intended for the extermination of vermin, orders that such cultures shall not be prepared or put on the market without a permit from the authorities of the Department concerned. Authorisation will be granted only in cases of necessity and to qualified persons. Such preparations may be stored and sold only with a permit from the authorities of the Department and under the control of the Ministry of the Interior.

The preparer must supervise the regulation working of his premises and the accurate and conscientious carrying out of the operations. He must entrust the responsibility for and the control of the work only to adequately competent persons.

The bacterial cultures used and the finished products must be kept by the preparer and trader in such a way that unauthorised persons are unable to procure them. It is thus necessary to do away with any infected material as soon as possible after use in order to avoid any risk of propagating the bacteria in question.

Preparers must keep up to date registers of the preparation of cultures ; these registers shall serve as a basis for the control of the date of preparation of the cultures, of the nature and duration of virulence of the cultures, and shall show clearly the progress of the sale and the destination of the preparations.

The bacterial preparations must be delivered in glass containers, hermetically closed and carefully packed. The receptacles must bear a label indicating the control number, the place of production, the nature and the duration of efficacy of the preparation. Each package must be accompanied by directions for use and a copy of the instructions issued by the German Service of Hygiene.

The preparation or storage of products intended for human consumption or for domestic animals in premises reserved for the preparation or storage of the cultures in question is prohibited. (*Hessisches Regierungsblatt*, Darmstadt, 20. März 1930, Nr. 3, S. 19-20).

Germany (Mecklenburg-Schwerin). — In virtue of a notification dated 3 March 1930, published in the ' Regierungsblatt für Mecklenburg-Schwerin ' (No. 11 of 1930), relating to the campaign against cockchafers [*Melolontha*] under-

taken by schools, teachers are required to release from attendance all scholars of ten years of age and over, for a period of ten working days, up to 10 a. m., so as to enable them to take part in the campaign against cockchafers, with the proviso that every guarantee is given of the campaign being carried out under the responsible direction of a competent person, whose duty is to exercise supervision.

The teachers are also expected to treat the subject of cockchafers in the course of the school instruction and to lay special stress on the measures adopted for their control. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1930, 10. Jahrg., Nr. 4, S. 31).

Germany (Free State of Saxony) (1). — By Decree of 1 April 1930, the Decree of 3 July 1928 on the prevention of the propagation of the wart disease of potatoes (' Kartoffelkrebs ', *Synchytrium endobioticum*) has been amended.

Beginning from 1 January 1932, the cultivation is prohibited in the Communes of Dresden, Leipzig, Coswig and Cossebaude of varieties of potatoes other than those prescribed for their resistance to wart disease and designated in detail in an attached schedule. For the other Communes, the Municipal Council or the mayor may, on the application of the Official Council of Horticulture or the Chamber of Agriculture, and beginning from the second civil calendar year following this demand, prohibit the growing of varieties of potatoes other than those resistant to wart disease, and specially prescribed and designated.

Lands belonging to persons who have been obliged to notify wart disease may be struck off the list of infected lands : (*a*) at the end of the statutory term of ten years ; (*b*) if the ground infected has been disinfected under expert supervision and if the owner who has been compelled to notify the disease undertakes in the presence of the communal authorities not to plant varieties of potatoes other than those resistant to wart disease and officially authorised, neither on the disinfected land, nor on the remainder of these lands which are included in the same farming unit ; (*c*) if the infected land has been transformed into grassland and if the owner undertakes in writing to leave it for at least ten years as grassland and during that time not to cultivate on the farmland any varieties of potato other than those officially authorised and recognised as resistant to wart disease ; (*d*) if the infected land is farmed in some other may which excludes the possibility of the propagation of the fungus of wart disease ; (*e*) if the State Experimental Station of Agriculture at Dresden has declared that the name can be erased from the list without risk of infection.

The list of cancellations of infected lands must be communicated in writing to the person who is responsible for notifying the disease and to the owner of the land by the communal authorities.

If a person whose business it is to notify the disease refuses to the prejudice of another person to take the necessary steps for cancellation in the case of a parcel previously infected, the Commune can take measures itself at the request and at the expense of the complainant whereupon the latter has to give compensation to the person who is responsible for notifying any damage caused by the measures taken.

If an infected plot is handed over to another person, the person responsible must inform the new holder of the number, the extent and the age of the existing centres of infection.

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(1) Communication from the Biologische Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

Germany (Thuringia). — In virtue of the Decree No. 20 of 8 March 1930 on the control of wart disease ('Kartoffelkrebs', *Synchytrium endobioticum*) every new outbreak ascertained or suspected of the disease must be immediately notified. After having examined the tubers sent to it, the Central Station for Plant Protection in Jena will judge whether it is a case of wart disease or not.

The Communes in which the presence of wart disease has been ascertained according to the opinion of the Central Station for Plant Protection, will be regarded as infected. If urban districts are concerned, then the surrounding rural areas must be declared infected. Communes will also be considered as infected the inhabitants of which have grown potatoes in fields adjacent to or lying at a short distance from infected parties. Communes bordering on infected Communes will be regarded as dangerously exposed to wart disease. The administrative authorities will publish twice a year the names of Communes infected. At the time of planting and also of the gathering of potatoes, the mayors of the Communes or of the towns will publish the list of plots infected by wart disease making part of their territory.

Cellars and other places which have been used to warehouse potatoes infected with wart disease must be well cleansed and disinfected with slaked lime. Implements employed on an infected plot must be immediately well cleaned on the fields. When they have to be lent to other farmers, tools must also be disinfected with slaked lime.

The mixing of potatoes coming from infected plots with sound potatoes is prohibited, as is also their utilisation otherwise than cooked or baked, and above all the replanting of them, unless it is a resistant variety that is replanted on plots already infected. In addition it is forbidden to sell or to give away manure, purin or compost coming from infected farms.

The cultivation on plots infected with wart disease is prohibited of varieties of potatoes other than those declared absolutely resistant by the German Service of Plant Protection. The names of these varieties will be published by the Ministry of National Economy.

Beginning from the second spring following the ascertainment of the presence of wart disease in the Communes, the cultivation on lands of these Communes exempt from the disease is prohibited of any varieties other than those recognised as completely resistant by the German Service of Plant Protection. This prescription may be extended to Communes suspected of infection.

The administrative authorities are empowered to forbid Communes infected or in danger of infection from obtaining any potatoes other than those recognised as resistant to wart disease.

The exportation of potatoes from infected Communes is prohibited. If however economic reasons make it absolutely necessary exceptions may be made.

Any infringement of or attempt to infringe the enactments of this Decree will be punished by imprisonment (up to one year) or a fine (up to 10.000 RM) or both.

The Decree of 30 January 1928 on control of wart disease is abrogated. (*Gesetzsammlung für Thuringen*, Weimar, 15. März 1930, Nr. 6, S. 20-22).

Brazil. — By 'resolução' of 15 March 1930 the 'Instituto Biologico de Defesa Agricola' of Rio de Janeiro has been authorised to import from the Republic of Argentina into the State of Rio Grande do Sul living specimens of the tachinid fly *Parexorista caridei* Bréthes for the biological control in the State of the 'bicho de cesto' (*Oeceticus kirbyi* Guilding). (*Boletim do Ministerio da Agricultura, Industria e Commermercio*, Rio de Janeiro, 1930, anno XIX, vol. I, n. 3, pag. 307).

France. — The finance law of 16 April 1930 has opened, for the financial year 1930-1931, under chapter 33 of the agricultural budget (plant protection), a credit of 3 700 000 fr., for the organisation of a campaign against the ' Colorado potato-beetle ' [*Leptinotarsa decemlineata*].

The Decree of 25 May 1930 has authorised for the same purpose a supplementary credit of 6 300 000 fr. (MINISTÈRE DE L'AGRICULTURE. DIRECTION DE L'AGRICULTURE. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 1er juillet 1930, année 1930, nº 13, p. 217-218).

*** A Decree of 25 July 1930 provides the regulations for the application of the Law of 10 March 1930 concerning the protection of crops against wild rabbits (see this *Bulletin*, 1930, No. 7, p. 106). (MINISTÈRE DE L'AGRICULTURE, DIRECTION DE L'AGRICULTURE. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 1er août 1930, année 1930, nº 15, p. 279).

Italy. — By Ministerial Decree of 30 June 1930, the Commune of Polla, in the province of Salerno, has been declared infected with grape phylloxera. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 16 luglio 1930, anno 71º, n. 165, p. 2856).

*** By Ministerial Decrees of 22 July 1390 the following Communes have been declared infected with grape phylloxera :— San Michele Mondovì (prov. of Cuneo), Baragiano (province of Potenza) and Copparo (province of Ferrara). (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 29 luglio 1930, anno 71º, n. 176, p. 3055).

Morocco (French Zone). — With regard to the importation of potatoes into the French Zone of the Sherifian Empire (see this *Bulletin*, Year IV, 1930, No. 1, p. 10) it has been established, *inter alia*, that consignment of these tubers must be effected in packing material which is strictly new.

Beginning from 1 August 1930 all consignments of potatoes not conforming to this condition shall be sent back at the senders' cost. (MINISTÈRE DE L'AGRICULTURE. DIRECTION DE L'AGRICULTURE. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 1er juillet 1930, année 1930, nº 12, p. 224).

Switzerland (Canton of Schaffhausen). — In virtue of a decision by the Government Council of 16 April 1930 modifying the Decree of 10 April 1886 concerning control measures against grape phylloxera [*Phylloxera vastatrix*], woolly aphis [*Eriosoma lanigerum*] and other crop pests, the costs of destruction of cockchafers [*Melolontha*] are borne by the Communal funds. The State will refund to the Communes half the expenses incurred on condition that the control measures are effected in accordance with the directions given and on presentation of a special account kept regularly up to date. The minimum rate of pay will be 30 ' Rappen ' per litre of cockchafers or their grubs. (*Amts-Blatt für den Kanton Schaffhausen*, Schaffhausen, 19. April 1930, Nr. 16, S. 385-396).

*** By a Notification of 24 April 1930 concerning the control of cockchafers and white grubs [*Melolontha*] the Director of Agriculture recommends that control measures shall be carried out as actively as possible. Trapping of the cockchafers and hand-picking of the white grubs are advised. Half the necessary expenditure will be borne by the State. Cockchafers and their grubs will be paid for at the min-

imum rate of 30 ' Rappen ' per litre. Further measures recommended are applying dressings of calcium cyanamide and superphosphate to the fields and meadows and protecting rooks [*Corvus*], starlings [*Sturnus*], moles [*Talpa*] and particularly bats. As cockchafers lay by preference in meadows it is advisable to harrow if possible at least three times a week during the time when they are flying. In laying down new meadow land a higher proportion of French ray-grass [*Arrhenatherum avenaceum*] should be used, because its roots are less susceptible to attack by white grubs. (*Amts-Blatt für den Kanton Schaffhausen*, Schaffhausen, 25. April 1930, Nr. 17, S. 401-403).

RECENT BIBLIOGRAPHY

[Imperial Institute of Entomology]. A list of the entomologists employed in the British Empire. Prepared for the Third Imperial Entomological Conference. London, The Imperial Bureau of Entomology, 1930, 16 pp.

James, H. C. Methods for the biological control of the common coffee mealy-bug. (Colony and Protectorate of Kenya. Department of Agriculture). Nairobi, 1930, pp. IV+16, 6 figs.
[*Pseudococcus citri*].

James, H. C. Repellent banding to control the ants attending the common coffee mealy-bug). (Colony and Protectorate of Kenya. Department of Agriculture). Nairobi, 1930, pp. II+14, 3 figs.
[« Coffee mealy-bug = *Pseudococcus citri*].

Jancke, Oldwig. Beitrag zur Kenntnis der geflügelten Blutlausweibchen und ihrer Nachkommen. *Zeitschrift für angewandte Entomologie*, Berlin 1930, Bd. XVI, Heft 2, S. 229-303. Abb. 1-52.
[*Eriosoma lanigerum*].

Kienholz, Jess R., and Heald, F. D. Cultures and strains of the stinking smut of wheat. *Phytopathology*, Lancaster, Pa., 1930, Vol. 20, No. 6, pp. 495-512, figs. 1-6.
[*Tilletia Tritici* and *T. levis*].

Kleine, R. Beiträge zur Kenntnis der Generationsfrage von Oscinis frit L. *Zeitschrift für angewandte Entomologie*, Berlin 1930, Bd. XVI, Heft 2, S. 377-384, 1 Abb.

Köck, Gustav. Einiges über die Frostwirkungen des Winters 1928/29 bei unseren Obstbäumen. *Gartenzeitung*, Wien 1930, Jahrg. 1930, Heft 5, S. 79-81 ; Heft 6, S. 94-95.

Labrousse, F. Influence de la fumure sur la résistance d'une variété de laitue à la maladie du collet causée par le *Sclerotinia libertiana*. *Revue de Pathologie Végétale et d'Entomologie Agricole*, Paris, 1930, tome XVII, fasc. 5 et 6, p. 222-226.

Langston, J. M. Some experiments with the pecan weevil. *The Quarterly Bulletin of the Plant Board of Mississippi*, A. & M. College, Mississippi, 1930, Vol. 9, No. 4, pp. 10-12.
[*Curculio caryae*].

Laubert, R. Eine eigenartige Hyazinthenblumenknospen-Schädigung. *Die kranke Pflanze*, Dresden 1930, 7. Jahrg., Heft Nr. 3/4, S. 48-49.
[By means of Acarina].

LAUBERT, R. Eine sehr brachtenswerte Krankheit der Nelken. *Der Blumen- und Pflanzenbau*, Berlin 1930, 45. Jahrg., Heft 7, S. 109-111, 3 Abb.
[*Pseudodiscosia Dianthi*].

LIMING, O. NEAL, and YOUNG, H. C. Toxicity of sulphur to spores of Sclerotinia cinerea as affected by the presence of penthathionic and other sulphur acids. *Journal of Agricultural Research*, Washington, D. C., 1930, Vol. 40, No. 10, pp. 951-962, figs. 1-12.

LÖSCHNIG, JOSEPH. Winterfrostschäden an Obstbäumen 1928/29. *Die Landwirtschaft*, Wien 1930, Jahrg. 1930, Nr. 5, S. 218-219, Fig. 81-82 ; Nr. 6, S. 258-260.

MALENOTTI, E. Esperienze col « Rustica salus » sul frumento. *Giornale di Agricoltura della Domenica*, Piacenza, 1930, anno XL, n. 30, p. 391.

MALENOTTI, ETTORE. I gravi danni di un insetto trascurato. *L'Italia Agricola*, Piacenza, 1930, anno 67°, n. 5, pp 284-290, 1 fig.
[*Pyrausta nubilalis*].

MARTYN, E. B. The Sclerotium disease of coffee. Some notes on the origin of the disease, its outbreak, and control. *The Agricultural Journal of British Guiana*, Georgetown, 1930, Vol. III, No. 1, pp. 28-34.
[*Sclerotium coffeicolum* Stahel].

MAY, CURTIS. The effect of grafting on resistance and susceptibility of tomatoes to Fusarium wilt. *Phytopathology*, Lancaster, Pa., 1930, Vol. 20, No. 6, pp. 519-521.
[*Fusarium Lycopersici*].

MCCOMAS, R. B. University of Adelaide. Official opening and inspection of the plant culture houses and insectary. Waite Agricultural Research Institute, 9th December, 1929. Adelaide, The Hassell Press, 1929, 20 pp., 4 pls., 2 plans.

METZGER, F. W. Methods used in testing materials as repellents against the Japanese beetle. *Journal of Agricultural Research*, Washington, D. C., 1930, Vol. 40, No. 7, pp. 659-671, figs. 1-6.
[*Popillia japonica*].

MILLER, N. C. E., and PAGDEN, H. T. Preliminary observations on *Sogata* spp. pests of padi. *The Malayan Agricultural Journal*, Kuala Lumpur, 1930, Vol. XVIII, No. 5, pp. 238-241.

MONTI, RINA. La battaglia contro i maggiolini. Osservazioni, esperienze, proposte. Relazione a S. E. il Ministro. *Ministero dell'Agricoltura e delle Foreste. Nuovi Annali dell'Agricoltura*, Roma, 1930, anno IX, n. 3-4 (1929), pp. 509-529, 3 figg.
[*Melolontha vulgaris, M. hippocastani*, in Lombardy].

MOREAU, FERNAND. Sur une maladie du blé en herbe. *Revue de Pathologie Végétale et d'Entomologie Agricole*, Paris, 1930, tome XVII, fasc. 5 et 6, p. 236-239, fig. 1.
[*Cladosporium herbarum*].

MORWOOD, R. B. Flagsmut in wheat experiments, 1929. *Queensland Agricultural Journal*, Brisbane, 1930, Vol. XXXIII, Pt. 6, pp. 381-388.
[*Urocystis Tritici*].

MUNCIE, J. H., and PATEL, M. K. Studies upon a bacteriophage specific for *Pseudomonas tumefaciens*. *Phytopathology*, Lancaster, Pa., 1930, Vol. 20, No. 4, pp. 289-305.

MUNCIE, J. H., and SUIT, ROSS F. Studies of crowngall, overgrowths and hairyroot on apple nursery stock. *Iowa State College Journal of Science*, Ames, Iowa, 1930, Vol. IV, No. 2, pp. 263-313, pls. I-VII. Literature cited, p. 299.
[*Pseudomonas tumefaciens, Bacillus radiobacter*].

MURPHY, PAUL A. Experiments on the control of American gooseberry mildew. (1925-1929). *Department of Agriculture. Journal*, Dublin, 1930, Vol. XXIX, No. 2, pp. 188-204.
[*Sphaerotheca mors-uvae*].

MURRAY, R. K. S. A disease of young bud-shoots caused by Phytophthora. *The Planters Journal and Agriculturist*, Calcutta, 1930, Vol. XII, No. 13, pp. 24-25, pls. I-II.
[*Phytophthora palmivora* on *Hevea* in Ceylon].

NEAVE, S. A. A summary of data relating to Economic Entomology in the British Empire. Prepared for the Third Entomological Conference. London, The Imperial Bureau of Entomology, 1930, 23 pp.

NICHOLLS, H. M. The lucerne flea (*Sminthurus viridis*). *The Tasmanian Journal of Agriculture*, Tasmania, 1930, Vol. I (New Series), No. 3, pp. 115-119, 2 figs.

NICOLAS, G. Un parasite dangereux pour certains escourgeons. *Revue de Pathologie Végétale et d'Entomologie Agricole*, Paris, 1930, tome XVII, fasc. 3, p. 94-96.
[*Fusarium hordearium* Duc.].

NICOLAS, G. Sur la transpiration des plantes parasitées par des champignons. *Revue Générale de Botanique*, Paris, 1930, tome XLII, nº 497, p. 257-271.

OBRAZTSOV, N. S. Beitrag zur Biologie von Loxostege sticticalis L. (Lep., Pyr.). *Zeitschrift für wissenschaftliche Insektenbiologie*, Leipzig 1930, Bd. XXV, Nr. 1/2, S. 13-18, Abb. 1-6.

O' BRIEN, D. G., and PRENTICE, E. G. Leaf stripe or yellow leaf of oats. *The Scottish Journal of Agriculture*, Edinburgh, 1930, Vol. XIII, No. 3, pp. 272-284, figs. 1-5, pls. I-IV.
[*Helminthosporium Avenae-sativae*].

OLDAKER, C. E. W., and DOWSON, W. J. Potatoes. Elimination of virus and other diseases — Care of « seed » from the selected plants. *The Tasmanian Journal of Agriculture*, Tasmania, 1930, Vol. I (New Series), No. 3, pp. 87-91, 3 figs.

PAILLOT, A. Parasitisme bactérien et symbiose chez l'*Aphis mali*. *Comptes rendus hebdomadaires des séances de l'Académie des Sciences*, Paris, 1930, tome 190, nº 14, p. 895-896.

PAILLOT, A. Traitement d'hiver des arbres fruitiers par les émulsions d'huile minérale en bouillie cuprique. *Comptes rendus des séances de l'Académie d'Agriculture de France*, Paris, 1930, tome XVI, nº 5, p. 181-183.

PAINTER, REGINALD H. A study of the cotton flea hopper, Psallus seriatus Reut., with especial reference to its effects on cotton plant tissues. *Journal of Agricultural Research*, Washington, D. C., 1930, Vol. 40, No. 6, pp. 485-516, figs. 1-7.

PETHYBRIDGE, GEO. H., and SMITH, ALEX. A watery wound rot of the potato tuber. *The Journal of the Ministry of Agriculture*, London, 1930, Vol. XXXVII, No. 4, pp. 335-340, figs. 1-4.
[*Pythium de Baryanum*].

PETRI, L. Il grano. Le vere cause del mediocre rendimento di alcune coltivazioni. *Giornale di Agricoltura della Domenica*, Piacenza, 1930, anno XI, n. 31, p. 402.
[Notes a virulent and extensive attack by a species of *Pythium* which was observed in 1930 as affecting wheat in the province of Padua].

QUANJER, H. M., THUNG, T. H., ELZE, D. L., en LIKHITÉ, V. The virus diseases of the plants. *Landbouw*, Buitenzorg, 1930, V. Jaarg., No. 10, blz. 793-836.
[In Dutch with title and summary also in English].

RADEMACHER, BERNHARD. Vergleichende Untersuchungen über Stäube - und Köderverfahren bei der Bekämpfung der Rübenaaskäfer. *Arbeiten aus der Biologischen Reichsanstalt für Land- und Forstwirtschaft*, Berlin 1930, XVIII. Bd., Heft 1, S. 101-115, Fig. 1-2. Benutzte Schriften, S. 115.
[*Blitophaga*, *Silpha*].

RAVAZ, L. Sur le court-noué. *Annales de l'Ecole Nationale d'Agriculture de Montpellier*, Montpellier, s. d., nouv. sér., tome XX, fasc. II, p. 110-125, fig. 1-5, pl. I-III.

REICHERT, ALEX. Rosenschädlinge. *Die kranke Pflanze*, Dresden 1930, 7. Jahrg., Heft Nr. 3/4, S. 49-53, 1 Taf.
[*Arge rosae* L., *A. pagana* Panz.].

RIPPER, WALTER. Rhodophaea suavella Zck. auf Cotoneaster. *Zeitschrift für angewandte Entomologie*, Berlin 1930, Bd. XVI, Heft 2, S. 382-387, Abb. 1-4.

RODE, P. Le parasitisme des Enchytréides. *Revue de Pathologie Végétale et d'Entomologie Agricole*, Paris, 1930, tome XVII, fasc. 5 et 6, p. 240-252, fig. 1. Bibliographie, p. 252.

RONCORONI, ETTORE. Le cavolaie. Varese, Tipografia Arcivescovile dell'Addolorata, 1930, 129 pp., 9 tav.
[Treats of *Pieris brassicae* (and its parasite *Apanteles glomeratus*), *P. rapae*, *P. napi*, *Mamestra brassicae*, *Agrotis pronuba*, *Ceutorrhynchus sulcicollis*, *Chortophila brassicae*].

RŮŽIČKA, JAROSLAV. Chrysomyxa abietis (Wallr.) Ung. im J. 1929. *Lesnická Práce*, Pisku 1930, roč. IX, čis. 6, str. 263-265.
[In Czech with title and summary also in German].

RUŽIČKA, JAROSLAV. Über die Nonnengefahr im J. 1930. *Lesnická Práce*, Písku 1930, roč. IX, č. 5, str. 202-221.
[In Czech, with title and summary also in German. *Lymantria monacha*].

SACHAROV, L. L. Studies in cold resistance of insects. *Ecology*, Brooklyn, N. Y., 1930, Vol. XI, No. 3, pp. 504-517.

SALMON, E. S., and WARE, W. M. The chlorotic disease of the hop. *The Annals of Applied Biology*, London, 1930, Vol. XVII, No. 2, pp. 241-247, pls. XXI-XXII.
[A virus disease].

SAVULESCU, Tr., et RADULESCU, I. Une nouvelle maladie bactérienne sur les feuilles du tabac en Roumanie. *Revue de Pathologie Végétale et d'Entomologie Agricole*, Paris, 1930, tome XVII, fasc. 3, p. 75-77.
[*Bacterium melleum* Johnson].

* SCASSELLATI SFORZOLINI, GIUSEPPE. L'agricoltura nella Somalia italiana. *Rassegna Economica delle Colonie*, Roma, 1930, anno 18°, nn. 1-2, pp.96-147, 15 figg.
[Mentions also pests of sorghum, maize, cotton, sugar cane, sesame and sunflowers].

SCHEIBE, ARNOLD. Studien zum Weizenbraunrost, Puccinia triticina Erikss. III. Über die geographische Verbreitung der einzelnen physiologischen Formen und Formenkreise in Deutschland und in seinen angrenzenden Gebieten. *Arbeiten aus der Biologischen Reichsanstalt für Land- und Forstwirtschaft*, Berlin 1930, XVIII. Bd., Heft 1, S. 55-82, 5 Karten. Literaturverzeichnis, S. 81-82.

SEIN, FRANCISCO, JR. A new mechanical method for artificially transmitting sugar-cane mosaic. *The Journal of the Department of Agriculture of Porto Rico*, Río Piedras, P. R., 1930, Vol. XIV, No. 2, pp. 49-68. Literature cited, pp. 67-68.

S'JACOB, J. C. Microscopical investigation on Hevea mildew. *Archief voor de Rubbercultuur in Nederlandsch-Indië*, Buitenzorg 1930, 14e jaarg., no. 4, blz. 171-185, fig. I-X.
[In Dutch, with title and summary also in English. *Oidium Heveae*].

SMITH, KENNETH M. Transmission of potato leaf roll. *Nature*, London, 1930, Vol. 126, No. 3168, p. 96.

STANER, P. Maladies du Citrus au Congo belge. *Bulletin Agricole du Congo Belge*, Bruxelles, 1929, vol. XX, n° 3, p. 363 - 365, fig. 170-176.
[*Pythiacystis citrophthora*, *Sporotrichum Citri*, *Colletotrichum gloeosporioides*, *Capnodium Citri*, *Cephaleuros virescens*, « chlorosis », *Loranthus* sp.].

STEENBURGH, W. E. A season's work on the colonization in Ontario of *Macrocentrus ancylivora* Rohwer, a parasite of the oriental peach moth (*Laspeyresia molesta* Busck). *The Canadian Entomologist*, Orillia, 1930, Vol. LXII, No. 4, pp. 71-75, 1 fig.

STEINMETZ, F. H. The control of carnation rust, Uromyces caryophyllinus (Schr.) Wint., with sulphur. *Phytopathology*, Lancaster, Pa., 1930, Vol. 20, No. 4, pp. 363-364.

STELLWAAG, F. Giftigkeit und Giftwert der Insektizide. III. Teil : Allgemeine Technik der physiologischen Wertbestimmung. (Schluss). *Anzeiger für Schädlingskunde*, Berlin 1930, VI. Jahrg., Heft 6, S. 64-68, Abb. 1.

STRICKLAND, E. H. Phagocytosis of internal insect parasites. *Nature*, London, 1930, Vol. 126, No. 3168, p. 95.

SZYMANEK, J. Notes phytopathologiques sur les cotonniers au Sudan Français. *Revue de Botanique Appliquée et d'Agriculture Tropicale*, Paris, 1930, 10e année, Bulletin nº 105, p. 294-299, fig. 14-15.
[Records *Fusarium vasinfectum* as the most injurious parasite].

THOMPSON, W. R. The principles of biological control. *The Annals of Applied Biology*, London, 1930, Vol. XVII, No. 2, pp. 306-338.

TRUFFAUT, GEORGES, et PASTAC, I. Sur l'emploi des colorants organiques dans le traitement des affections cryptogamiques des végétaux. *Comptes rendus des séances de l'Académie d'Agriculture de France*, Paris, 1929, tome XV, nº30, p. 1058-1063.

UVAROV, B. P. Instructions for observations on locusts. London, The Imperial Bureau of Entomology, 1930, 6 pp., 4 figs.
[The description and a drawing are given of the male of *Anacridium moestum* Serv., *Locusta migratorioides* R. et F., *Schistocerca gregaria* Forsk., *Nomadacris septemfasciata* Serv.].

VACCANEO, ROBERTO. Lo storno europeo negli Stati Uniti d'America e le indagini compiute in Italia sull'importanza economica di alcune specie dei generi *Passer* e *Sturnus*. *Natura*, Pavia, 1930, vol. XXI, fasc. I, pp. 36-46.

VAYSSIÈRE, P. Les Acridiens migrateurs en Afrique française au cours de l'année 1929. *Comptes rendus hebdomadaires des séances de l'Académie des Sciences*, Paris, 1929, tome 189, nº 23, p. 1021-1022.
[*Schistocerca gregaria* in French Equatorial Africa, *Locusta migratoria* ph. *migratorioides* in the French Sudan, *Dociostaurus maroccanus* in Algeria and Morocco].

VERCIER, J. Essai de lutte contro la hernie du chou. *Revue Horticole*, Paris, 1930, 102e année, nº 4, p. 86-88.
[*Plasmodiophora Brassicae*].

VERONA, O. Osservazioni sul parassitismo della « Phyllosticta Camelliae » West. *Bollettino del R. Istituto Superiore Agrario di Pisa*, Pisa, 1929, V vol., pp. 345-347.

VERPLANCKE, GERMAIN. Une maladie « à virus filtrant » des *Anthurium*. *Comptes rendus des séances de la Société de Biologie et de ses filiales*, Paris, 1930, tome CIII, nº 7, p. 524-526.
[In Belgium].

VIALA. Les matières colorantes contre le mildiou et l'oïdium. *Comptes rendus des séances de l'Académie d'Agriculture de France*, Paris, 1930, tome XVI, nº 1, p. 42-45.
[*Plasmopara viticola*, *Oidium Tuckeri*].

VOGLINO, P. Erpete furfuracea delle pere (*Macrosporium epicarpium* Mac Alp.). *Bollettino del Laboratorio Sperimentale* (*Regio Osservatorio Regionale*) *di Fitopatologia*, Torino, 1930, anno 7º, n. 3, pp. 1-3.

VOGLINO, P. Le macchie ocracee del melo (*Phyllosticta Briardi* Sacc.). *Bollettino del Laboratorio Sperimentale* (*Regio Osservatorio Regionale*) *di Fitopatologia*, Torino, 1930, anno 7º, n. 1, pp. 1-3.

VOGLINO, P. L'erpete del melo (*Diplodina Cydoniae* [Schl. v. Mügg.] Sacc. et Trott.). *Bollettino del Laboratorio Sperimentale* (*Regio Osservatorio Regionale*) *di Fitopatologia*, Torino, 1930, anno 7º, n. 2, pp. 1-6, figg. 1-5.

VOGLINO, PIERO. I funghi più dannosi alle piante coltivate osservati nella provincia di Torino e regioni vicine durante l'anno 1928. *Annali della R. Accademia d'Agricoltura di Torino*, Torino, 1930, vol. LXXII, 1929, pp. 35-46.

VOGLINO, PIERO. Il servizio di esportazione delle castagne dal Piemonte verso gli Stati Uniti d'America nell'anno 1929. Relazione a S. E. il Ministro. *Ministero dell'Agricoltura e delle Foreste. Nuovi Annali dell'Agricoltura*, Roma, 1930, anno IX, nn. 3-4 (1929), pp. 597-614.

[The disinfection of chestnuts attacked by *Carpocapsa splendana* var. *reaumurana* and *Balaninus elephas* is made by means of immersion in hot water at 50° C. for 45 minutes and by fumigation with carbon bisulphide].

VON BREHMER, W., und BÄRNER, J. Ueber die Viruskrankheiten bei der Kartoffel. *Arbeiten aus der Biologischen Reichsanstalt für Land- und Forstwirtschaft*, Berlin 1930, XVIII. Bd., Heft 1, S. 1-54, Abb. 1-31, 1 graph. Darstellung, 1 Taf. Literaturübersicht, S. 52-54.

WEHSARG, OTTO. Die Verbreitung und Bekämpfung der Ackerunkräuter in Deutschland. Band II : Einzelunkräuter, ihr Vorkommen und ihre Bekämpfung. Lieferung IV : Gilbsterne, Lauche, Lilien, Tulpen, Bisamhyazinthen, Blausterne, Milchsterne, Schnee- und Märzglöckchen, Narzissen, Krokus, Siegwurz und Orchideen. (Arbeiten der Deutschen Landwirtschafts- Gesellschaft. Heft 371. Die Bekämpfung des Unkrautes. Achtzehntes Stück). Berlin 1929, 96 S., 35 Abb., 1 Taf.

[*Gagea* spp., *Allium* spp., *Lilium* spp., *Tulipa silvestris, Muscari* spp., *Scilla bifolia, Ornithogalum* spp., *Galanthus nivalis, Leucoium vernum, Narcissus* spp., *Crocus vernus, Gladiolus* spp., *Orchis* spp., *Platanthera bifolia, Listera ovata.*

Information with regard to the morphology and biology of these plants, the damage produced by them and means of controlling them, with bibliographical references].

ZAZZERI, EMO TEMISTOCLE. Un metodo complementare di difesa contro il bupreste delle amigdalacee. *Nuova Antologia Agraria, Enologica e Fitopatologica*, Alba, 1930, anno I, n. 4, pp. 59-60, 1 fig.

[*Capnodis tenebrionis*].

NOTES

Xth International Olive Growing Congress. — This Congress (cf. this *Bulletin*, 1930, No. 8, p. 128) has been postponed to the spring of 1931.

Prize Competition for a Method of Control of the 'Mal secco' of Citrus Plants. - The competition with a prize of 100 000 liras for a control method against the mal secco ' of citrus plants [*Deuterophoma tracheiphila* Petri], announced by the ' Camera Agrumaria ' of Messina (cf. this *Bulletin*, 1929, No. 7, p. 104), has been postponed until 26 July, 1931.

Prof. ALESSANDRO BRIZI, *Segretario generale dell'Istituto, Direttore responsabile.*

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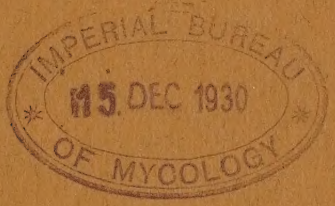

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